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10/542,225	07/14/2005	Kenji Kono	81887.0128	3354
26/21 7590 01/29/2011 Hogan Lovells US LLP 1999 AVENUE OF THE STARS SUITE 1400 LOS ANGELES, CA 90067				
EXAMINER				
HO, HUY C				
ART UNIT		PAPER NUMBER		
2617				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/542,225

Applicant(s)

KONO, KENJI

Examiner

HUY C. HO

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-10, 12, 14, 15 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-10, 12, 14, 15, 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01/23/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 19 and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Particularly, claims 19 and 20 recited "changing the criterion of the determination of handoff if it is determined ... has performed the predetermined repetition pattern of handoffs and a strength or a quality of a current signal is below a predetermined threshold." As pointed out by the applicant in the argument on page 12 of the Remarks that the signal strength of a current signal is below a threshold that is supported by Figure 2 in the Specification. However, from figure 2, steps 103 and 104, suggest the contradiction to the new limitation, i.e., signal strength of a current signal is below a threshold.

In fact, step 103 checks for C/I values of A and B are greater than a threshold alpha, if yes, then step 104 changes the threshold alpha to determine whether or not the idle handoff is to be performed; if no, then step 105 is executed the regular handoff procedure. The invention provides supports for changing the criterion based on checking if the signal strengths of pilot signals A and B are greater than a value of a predetermined threshold alpha, not smaller or below the threshold alpha, while the new amended limitation recites "signal strength of a current signal is below a threshold", which is not supported and thus introduces new matter.

For referencing, Paragraphs [54]-[58] of the Publication 2006/0052104 are provided in quotes below.

[0054] That is, through the processing shown in FIG. 2 for setting a threshold value, it is determined that the handoff have repeatedly arisen in a single pilot signal in each step 101, 102.

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[0055] Next, in step 103, it is determined whether or not a C/I value (A) of the current pilot signal and a C/I value (B) of the pilot signal before the last idle handoff are greater than a preset value .alpha..

[0056] If the C/I values of the two pilot signals are greater than .alpha., it proceeds to step 104.

[0057] If the C/I values of the two pilot signals are sufficiently large, the qualities of the pilot signals are superior. Thus, communication with only one of the pilot signals is sufficient so that it is unnecessary to perform the idle handoff.

[0058] If the C/I values of the two pilot signals are smaller than .alpha., the throughput of communication is improved by communicating with the pilot signal having the larger C/I value. Therefore, the threshold value of the ordinary idle handoff is set (step 105).

[0059] The value of .alpha. is previously determined through a test or the like such that the best communication throughput is attained in terms of a relationship between the frequency of occurrence of the idle handoff and the C/I value.

Response to Arguments

2. Applicant's arguments with respect to claims 17-20 have been considered but they are moot, and arguments for claims 1-4, 6-10, 12 and 14-15 are not persuasive for reasons follows.

For arguments on 7-9, i.e., Cuffaro does not teach or suggest "determination section ...changes the criterion of the determination of the handoff if it is determined that the handoff section has performed the predetermined repetition pattern of handoffs." The examiner respectfully disagrees because Cuffaro teaches detecting for a mobile station when the mobile station experiences oscillating handoffs within a predetermined period of time, e.g., every 10 sec. Once this is detected, then the mobile station stops the repetition handoffs for an inhibition period time. Oscillating handoff is detected when a mobile station go back and forth form a cell to another cell and the determination of

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the oscillating handoff is based on number of handoffs for a predetermined of time period. If the time period between handoffs is longer than the set predetermined period, then it is determined not an oscillating handoff. So once the determination is classified as an oscillating handoff, or repetition handoff, the mobile station stops the oscillating handoff process for a predetermined time period. Other words, once the repetition of handoffs occur for the mobile station when it moves between cells, the handoff is detected, and a judgment is made from the determination of the repetition handoff, and resulting in stopping or inhibiting the mobile station from repetition/oscillating handoffs (See Cuffaro, col 3 lines 30-65, col 6 lines 40-65). Therefore, Cuffaro teaches and discloses determination section ...changes the criterion of the determination of the handoff if it is determined that the handoff section has performed the predetermined repetition pattern of handoffs.

For arguments for amended claims 17 and 18, the claims have been amended with “when a handoff is performed so that a currently acquired pilot signal is switched to return to a same pilot signal that is same as a preceding pilot signal, changing the criterion of the determination of the handoff based on time period during which the currently acquired pilot signal is acquired until returning to the same pilot signal.” The amended limitations emphasize on the repetition handoff where a current acquired pilot signal is the same to a previous/preceding pilot signal, then changing the criterion of determination of the handoff based on time period of switching between the two pilot signals, the current and the preceding signals. Cuffaro, in facts, teaches and discloses detection of a mobile station experiencing oscillating/repetition handoffs, determination is made if it is a oscillating handoff based on time duration between the handoffs, then a judgment is made in term of inhibiting the handoffs for a predetermined time period (Cuffaro, col 3 lines 30-65, col 6 lines 40-65). Therefore, the claimed limitations were written such that they read upon the cited reference.

Furthermore, the criterion changing is just some rules that it applied for determining of the handing off when it is experiencing such repeating handoffs, or oscillating, or ping pong handoffs. Changing criterion is disclosed and explained in Fig. 2 of the Spec, i.e., changing the threshold value which is a set value for comparing to pilot signals when these pilots swing back and forth that creating what calls “repetition handoff” or oscillating handoff or ping pong handoff.

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Cuffaro disclosed determination if repeat handoffs occurs by checking time periods of contiguous sequence of handoff, if the period is less than a set threshold, then it is determined an oscillating handoff. Also, Figure 3 disclosed checking for signal strength and if it is above a safe threshold level, it stops or inhibits or restricts the handoffs because first it checks for how frequent the oscillation occurs between sequent repeats in term of timing period as in Fig 2B, and on top of that, checking for a signal strength if it above some safe threshold then determining not granting handoff, because it is too frequently hand offs and it is inhibited as oscillating handoff. On figure 3, if the signal strength is not above the threshold, then it allows a regular handoff because the signal is low and need handoff in order to having a good signal connection. This featured disclosure is the same as in the Applicant's disclosure in pp [55]-[59] as pointed out above for reference.

As such, changing the criterion in the application read upon Cuffaro because Cuffaro "inhibiting the oscillating handoffs after checking the signal strengths if they above a threshold, then inhibiting of oscillating MS for predetermined time period, this reads upon changing criterion , or changing rules for handoff. Other words, it stops the process of handoff for a predetermined time period and after the time period expires, it allows handoff. So this is a change in making determination of handoff or not.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, 7-10, 14-15, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Cuffaro et al. (US Patent No. 5,999,814).

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Regarding claim 1 (Previously presented), Cuffaro teaches a wireless communication terminal (*Cuffaro, the abstract*), comprising:

a measurement section that measures quality of a signal transmitted from a base station (*Cuffaro, col 1 lines 15-67, col 2 lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11, signal strength is measured from a cell*);

a determination section that determines whether or not handoff is to be performed based on a measurement result of the measurement section and a criterion of the determination of the handoff (*Cuffaro, col 1 lines 15-67, col 2 lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11, determining for handoff based on the measured signal strength and determining whether the signal strength is above a safe threshold value to preventing oscillating handoffs back and forth*); and

a handoff section that performs the handoff based on a determination result of the determination section (*Cuffaro, col 1 lines 15-67, col 2 lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11, determining for handoff based on the measured signal strength and determining whether the signal strength is above a safe threshold value to preventing oscillating handoffs back and forth*);

wherein the determination section determines whether the handoff section has performed a predetermined repetition pattern of handoffs, and changes the criterion of the determination of the handoff if it is determined that the handoff section has performed the predetermined repetition pattern of handoffs (*Cuffaro, col 1 lines 15-67, col 2 lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11, determining for handoff based on the measured signal strength and determining whether the signal strength is above a safe threshold value to preventing oscillating handoffs back and forth*).

Regarding claim 7, (Previously presented) A handoff determination method of a wireless communication terminal which performs wireless communication using each of a first communication method and a second communication method and enables to be in an idle state condition with both methods, the handoff determination method comprising the steps of:

measuring quality of a signal transmitted from a base station (*Cuffaro, col 1 lines 15-67, col 2*

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lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11, determining for handoff based on the measured signal strength);

determining whether or not a handoff is to be performed based on a measurement result and a criterion of the determination of the handoff (Cuffaro, col 1 lines 15-67, col 2 lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11, determining for handoff based on the measured signal strength and determining whether the signal strength is above a safe threshold value to preventing oscillating handoffs back and forth);

performing the handoff based on a determination result (Cuffaro, col 1 lines 15-67, col 2 lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11);

determining whether the handoff section has performed a predetermined repetition pattern of handoffs (Cuffaro, col 1 lines 15-67, col 2 lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11, determining for handoff based on the measured signal strength and determining whether the signal strength is above a safe threshold value to preventing oscillating handoffs back and forth); and

changing the criterion of the determination of the handoff if it is determined that the handoff section has performed the predetermined repetition pattern of handoffs (Cuffaro, col 1 lines 15-67, col 2 lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11, determining for handoff based on the measured signal strength and determining whether the signal strength is above a safe threshold value to preventing oscillating handoffs back and forth).

Regarding claim 17, (Currently Amended) A wireless communication terminal comprising:

a measurement section that measures quality of a signal transmitted from a base station (Cuffaro, col 1 lines 15-67, col 2 lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11, determining for handoff based on the measured signal strength);

a determination section that determines whether or not handoff is to be performed based on a measurement result of the measurement section and a criterion of the determination of the handoff (Cuffaro, col 1 lines 15-67, col 2 lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11, determining for handoff based on the measured signal strength and determining whether the signal strength is above a safe threshold value to preventing oscillating handoffs back and forth);

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a handoff section that performs the handoff based on a determination result of the determination section (*Cuffaro*, col 1 lines 15-67, col 2 lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11, *determining for handoff based on the measured signal strength and determining whether the signal strength is above a safe threshold value to preventing oscillating handoffs back and forth*);

a detection section that detects a time period during which a pilot signal is acquired (*Cuffaro*, col 1 lines 15-67, col 2 lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11, *determining for handoff based on the measured signal strength and determining whether the signal strength is above a safe threshold value to preventing oscillating handoffs back and forth*); and

a change section that when a handoff is performed so that a currently acquired pilot signal is switched to return to a same pilot signal that is the same as a preceding pilot signal, changes the criterion of the determination of the handoff based on a detected time period during which the currently acquired pilot signal is acquired until returning to the same pilot signal (*Cuffaro*, col 1 lines 15-67, col 2 lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11, *determining for handoff based on the measured signal strength and determining whether the signal strength is above a safe threshold value to preventing oscillating handoffs back and forth*).

Regarding claim 18, (Currently Amended) A handoff determination method comprising:

measuring quality of a signal transmitted from a base station (*Cuffaro*, col 1 lines 15-67, col 2 lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11, *determining for handoff based on the measured signal strength*);

determining whether or not a handoff is to be performed based on a measurement result and a criterion of the determination of the handoff performing the handoff based on a determination result (*Cuffaro*, col 1 lines 15-67, col 2 lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11, *determining for handoff based on the measured signal strength and determining whether the signal strength is above a safe threshold value to preventing oscillating handoffs back and forth*);

detecting a time period during which a pilot signal is acquired (*Cuffaro*, col 1 lines 15-67, col 2 lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11);

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when a handoff is performed so that a currently acquired pilot signal is switched to return to a same pilot signal that is the same as a preceding pilot signal, changes the criterion of the determination of the handoff based on a detected time period during which the currently acquired pilot signal is acquired until returning to the same pilot signal (*Cuffaro, col 1 lines 15-67, col 2 lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11, determining for handoff based on the measured signal strength and determining whether the signal strength is above a safe threshold value to preventing oscillating handoffs back and forth*).

Regarding claims 2, 8, (Original) The wireless communication terminal according to claims 1, 7, wherein the determination section changes the criterion of the determination of the handoff when a predetermined repetition of two pilot signals is acquired (*Cuffaro, col 1 lines 15-67, col 2 lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11, determining for handoff based on the measured signal strength*).

Regarding claims 3, 9, (Original) The wireless communication terminal according to claims 2, 8, wherein when qualities of the two pilot signals acquired repeatedly are equal to or greater than a predetermined value, the criterion of the determination of the handoff is changed (*Cuffaro, col 1 lines 15-67, col 2 lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11, determining for handoff based on the measured signal strength and determining whether the signal strength is above a safe threshold value to preventing oscillating handoffs back and forth*).

Regarding claims 4, 10, (Original) The wireless communication terminal according to claims 1, 7, further comprising:

a detection section that detects time during which a preceding pilot signal is acquired every time handoff is performed, wherein the determination section changes the criterion of the determination of the handoff based on the time detected by the detection section (*Cuffaro, col 1 lines 15-67, col 2 lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11*).

Regarding claims 14, 15, (Previously presented) The wireless communication terminal according to claims 1, 7, wherein the predetermined repetition pattern of handoffs is a return handoff (*Cuffaro, col 1 lines 15-67, col 2 lines 1-67, col 3 lines 1-15, col 6 lines 40-67, col 7 lines 1-11*).

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Regarding claims 19, 20, (New) The wireless communication terminal according to claims 1, 7, wherein the determination section changes the criterion of the determination of the handoff if it is determined that the handoff section has performed the predetermined repetition pattern of handoffs (*Cuffaro, col 3 lines 30-65, col 6 lines 40-65*), and a strength or a quality of a current signal is below a predetermined threshold (*Cuffaro, col 2 lines 35-50*).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Cuffaro et al.* (US Patent No. 5,999,814) and further in view of *Yun et al.* (US Patent No. 7,016,323).

Regarding claims 6, 12, (Currently amended) The wireless communication terminal according to any one of claims 1 to 4, 7 to 10.

Cuffaro does not teach CDMA2000 1x and 1xEVDO. *Yun*, in an analogous art, teaches method and system handling handoff for mobile stations in CDMA2000 1x and 1xEVDO (*see Yun, col 11 lines 9-50*), therefore it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify teachings of *Cuffaro* by incorporating teachings of *Yun* of system and method for implementing handoffs for mobile stations in cell areas of base stations in CDMA2000 1x and 1xEVDO systems as discussed by *Yun (see Yun, col 1 lines 20-67, col 2 lines 1-67)*.

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Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUY C. HO whose telephone number is (571)270-1108. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Huy C Ho/

Examiner, Art Unit 2617

/MICHAEL T THIER/

Primary Examiner, Art Unit 2617